

WHAT IS CLAIMED IS:

1. A toothbrush assembly comprising:
  - a hollow cartridge having an open upper end, a closed lower end, an internal  
5 storage area for receiving a quantity of dentifrice, and a piston slidably  
mounted in said storage area;
  - a canister having an open lower end and a hollow interior receiving said cartridge;
  - a brush head stem having a brush head and being attached to said canister, a  
passage extending through said stem connecting at least one aperture  
10 formed in said brush head with said storage area;
  - a normally closed valve cooperating with said passage for controlling a flow of  
dentifrice from said storage area to said at least one aperture in said brush  
head; and
  - an actuator positioned in said open upper end of said cartridge and applying a  
15 force to said piston whereby when dentifrice is present in said storage area  
and said valve is opened, said actuator moves said piston to force a  
quantity of the dentifrice to flow from said storage area and through said  
passage to said at least one aperture in said brush head.
- 20 2. The toothbrush assembly according to claim 1 wherein said valve is operable  
to be controlled by a button located on said canister.
3. The toothbrush assembly according to claim 1 wherein said cartridge is  
attached to said canister by a bayonet-type fitting.
- 25 4. The toothbrush assembly according to claim 1 including a supply tube  
positioned in said cartridge and connecting said storage area with said passage.
5. The toothbrush assembly according to claim 4 including a perforated wall  
30 positioned in said storage area adjacent said closed lower end of said cartridge, said wall  
being attached to an interior surface of said cartridge and to a lower end of said supply  
tube.

6. The toothbrush assembly according to claim 4 wherein said piston includes an aperture receiving said supply tube.

7. The toothbrush assembly according to claim 1 wherein said actuator is a helical compression spring.

8. A toothbrush assembly comprising:

10 a hollow cartridge having an open upper end, a closed lower end, an internal storage area for receiving a quantity of dentifrice and an apertured wall mounted in said storage area and attached to an interior surface of said cartridge;

a supply tube positioned in said storage area and attached to said perforated wall;  
a piston positioned in said storage area and slidably mounted on said supply tube;  
a canister having an open lower end and a hollow interior receiving said cartridge;  
15 a brush head stem having a brush head and being attached to said canister, a passage extending through said stem connecting at least one aperture formed in said brush head with said supply tube;

a normally closed valve cooperating with said passage for controlling a flow of dentifrice from said storage area to said at least one aperture in said brush head; and  
20

a spring positioned in said open upper end of said cartridge and applying a force to said piston whereby when dentifrice is present in said storage area and said valve is opened, said actuator moves said piston to force a quantity of the dentifrice to flow through said supply tube and said passage to said at least one aperture in said brush head.  
25

9. The toothbrush assembly according to claim 8 wherein said valve is operable to be controlled by a button located on said canister.

30 10. The toothbrush assembly according to claim 8 wherein said cartridge is attached to said canister by a bayonet-type fitting.

11. The toothbrush assembly according to claim 8 wherein said piston includes an aperture receiving said supply tube.

12. The toothbrush assembly according to claim 8 wherein said spring is a helical  
5 compression spring.

13. The toothbrush assembly according to claim 8 wherein at least another aperture is formed in said brush head.

10 14. A dentifrice supply apparatus for a toothbrush assembly, the toothbrush assembly having a brush head stem with a passage formed therein for supplying dentifrice to an aperture in a brush head of the stem, comprising:

a hollow cartridge having an open upper end, a closed lower end and an internal storage area;

15 a supply tube positioned in said storage area and adapted to be connected the passage of the brush head stem;

a piston slidably mounted on said supply tube; and

a quantity of dentifrice retained in said storage area between said piston and said  
20 lower end of said cartridge whereby when the dentifrice supply apparatus is attached to the toothbrush assembly and said piston is moved toward said lower end, a quantity of said dentifrice is caused to flow from said storage area and through said supply tube to the passage.

15. The toothbrush assembly according to claim 14 including a bayonet-type  
25 fitting attached to said cartridge and adapted to connect said cartridge to the toothbrush assembly.

16. The toothbrush assembly according to claim 15 including a perforated wall positioned in said storage area adjacent said closed lower end of said cartridge, said wall  
30 being attached to an interior surface of said cartridge and to a lower end of said supply tube.

17. The toothbrush assembly according to claim 14 wherein said piston includes an aperture receiving said supply tube.